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#### REMARKS

In the Office Action, the Examiner reviewed claims 1-57 of the above-identified US Patent Application, with the result that the specification was objected to for lacking an abstract, claims 48 and 51 were objected to in view of informalities, and all of the claims were rejected. More particularly, claims 1-22 were rejected under 35 USC §112, second paragraph, claims 1-4, 7-9, 12-20, 22-26, 29-31, 34-40, 42, 44-48 and 51-55 were rejected under 35 USC §102, claims 21 and 43 were rejected under 35 USC §103, and claims 1-57 were rejected under the judicially-created doctrine of obviousness-type double patenting. In response, Applicant has amended the specification and claims as set forth above. More particularly:

The specification has been amended to provide a title more indicative of the claimed subject matter, cite the parentage of this application, include headings that set forth the different sections of the application and generally comply with US practice, and provide an "Abstract of the Disclosure" on a separate page.

The claims were reviewed and amended to address various clerical matters.

Independent claims 1, 23, 45 and 51 have been amended to incorporate the limitations of their respective dependent claims 5, 27, 47, 49, 56 and 57, all but claim 56 being canceled as noted above.

Clams 48 and 51 have been amended to address the claim objection.

Applicant believes that the above amendments do not present new matter.

Favorable reconsideration and allowance of remaining claims 1-4, 6-26, 28-46, 48 and 50-56 are respectfully requested in view of the above amendments and the following remarks.

#### Rejection under 35 USC §112, Second Paragraph

Claim 1 and its dependent claims 2-22 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as his invention. The Examiner's concern was for the phrase "to render the material (7) airborne by the movement off the pest on, above, or in the region of the particulate material-bearing surface (4,14)," on the basis that "[i]t is unclear what is meant by rendering the material airborne by the movement off the pest on, above, or in . . . ." It appears the Examiner's concern was for the use of the word "off," which was a typographical error. As now amended, the correct phrase is "rendering the particulate material airborne by movement of the pest in the region of the surface." MPEP §2173.02 requires that:

Definiteness of claim language must be analyzed, not in a vacuum, but in light of (1) the content of the particular application disclosure, (2) the teachings of the prior art, and (3) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

Applicant respectfully believes that one of ordinary skill in the art would not find the

phrase in question indefinite after reading Applicant's application.

In view of the above remarks and amendments, Applicant respectfully requests withdrawal of the rejection under 35 USC §112, second paragraph.

#### Rejection under 35 USC §102

Independent claims 1, 23, 45, 51 and their remaining dependent claims 2-4, 7-9, 12-20, 22, 24-26, 29-31, 34-40, 42, 44, 46-48 and 52-56 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,189,831 to Miller et al. (Miller).

Applicant respectfully requests reconsideration of this rejection in view of the following comments.

As noted in §2131 of the MPEP:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the ...claim. The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e. identity of terminology is not required. (Citations omitted).

Applicant's as-filed independent method claim 1 required:

a particulate material (7,17) incorporating a killing or behaviour-modifying agent which method comprises directing, attracting or otherwise luring the pest on to, above, or otherwise adjacent a surface (4,14) bearing such a particulate material (7,17) to render the material (7) airborne by the movement

[of] the pest on, above, or in the region of the particulate material-bearing surface (4,14).

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Similarly, as-filed independent apparatus claim 23 required:

a particulate material (7,17) incorporating a killing or behaviour-modifying agent, wherein the particulate material (7,17) is capable of being rendered airborne by movement of the pest on, above, or in the region of the particulate material-bearing surface (4,14).

Also similarly, as-filed independent apparatus claim 45 required:

a particulate material (7,17) incorporating a pest killing or behaviourmodifying agent.

In contrast, the fungal spores 22 disclosed by Miller constitute the particles themselves, and therefore do not "incorporate" a pest-killing or behaviour-modifying agent" as required by Applicant.

In addition, and similar to as-filed claims 1 and 23, amended independent apparatus claim 45 and independent method claim 51 require, respectively:

the particulate material being capable of being electrostatically charged when rendered airborne by movement of the pest in the region of the surface.

and

forming the particulate material to be capable of being electrostatically charged when rendered airborne by movement of a pest.



Under the rejection of claim 1 and its dependent claims, the Examiner concluded

[Miller's] particulate material is considered an airborne material because the fungus spores contact and stick to the insect when the insect leaves or enters the particulate material surface.

Under the rejection of claim 23 and its dependent claims, the Examiner concluded

the insect is partially covered with the spores and this renders the spores as airborne.

However, these statements assume Applicant's use of "airborne" to include particulate material attached to a flying pest. To the contrary, Applicant uses the term "airborne" in accordance with its plain meaning: "borne in or by the air" (emphasis added). Webster's New Twentieth Century Dictionary, Unabridged, Second Edition (1977). MPEP §2111.01 requires that:

The words of a claim must be given their "plain meaning" unless they are defined in the specification.

Accordingly, Applicant's claimed airborne particles are borne in or by the air itself, and not by an object borne in or by the air. In Applicant's application, support for this meaning of the term "airborne" can be found at page 7, line 20 through page 8, line 3.

In contrast, the fungal spores 22 disclosed by Miller are never disclosed as being airborne, other than when attached to a flying pest.

In view of the above, Applicant believes that Miller does not anticipate independent claims 1, 23, 45 or 51 nor any of their dependent claims under the test for anticipation set forth at MPEP §2131, and therefore respectfully requests withdrawal of the rejection under 35 USC §102.

### Rejection under 35 USC §103

Dependent claims 21 and 43 were rejected under 35 USC §103 as being anticipated by Miller in view of U.S. Patent No. 5,927,001831 to Ballard et al. (Ballard). In view of the remarks addressing the §102 rejection, Applicant also believes that the combination of Miller and Ballard fails to teach or suggest Applicant's claimed invention, in that Ballard was merely applied for disclosing "an insect trap that is triangular and consists of an interior chamber and a triangular roof." Therefore, Applicant requests withdrawal of the rejection under 35 USC §103(a).

### **Double Patenting Rejection**

The Examiner rejected all of the remaining claims under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6,041,543 to Howse. Applicant hereby acknowledges that the present application and Howse are assigned to the same assignee.

In characterizing the rejection, the Examiner stated that

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The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Referring to claims 1-57, Howse discloses a method and trap where flying insects or insect pests are partially covered with an electrostatically charged particulate or powder material (see Howse, claim 21). This powder is capable of being airborne and the powder is composed of a biological pesticide and can be charged by friction. The powder is contained for long periods of time in a recess in an electrically insulating surface. The surface comprises a chamber that has raised edges to prevent loss of the powder (see Fig. 1) The chamber is capable of resting on a smooth surface and thus stands alone.

Furthermore, there is no apparent reason why applicant was prevent from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP §804.

Applicant respectfully requests reconsideration in view of the following remarks.

Under MPEP §804, Section II.B.1.(a), if Applicant's claims can be shown to be unobvious over the claims cited from Howse, issuance of a patent covering Applicant's claims would not result in an unjustified timewise extension of the right to exclude - the public policy that serves as the basis for judicially-created doctrine of obviousness-type double patenting rejections.

Applicant's independent claims require the use of a particulate material (7) that becomes electrostatically charged <u>only when</u> it is rendered airborne from its support surface (4). Applicant believes that his claimed apparatus and method are <u>not</u> obvious in

view of the apparatus and method as defined by the claims of Howse when evaluated according to MPEP §804, Section II.B.1., which states that

When considering whether the invention defined in a claim of an application is an obvious variation of the invention defined in the claim of a patent [or copending application], the disclosure of the patent may not be used as prior art. (Emphasis added).

The claims of Howse merely disclose "a surface inside the enclosure coated with particles carrying an electrostatic charge" (claim 1). Therefore, Applicants believe that their claims are not obvious in view of Howse's claims, because Howse's claims do not disclose or suggest Applicant's claimed particles (7) that become electrostatically charged only as the particles (7) are rendered airborne. Nothing in Howse discloses or suggests Applicant's claimed use of a particulate matter (7) that is not electrostatically charged until the motion of a pest causes the matter (7) to become airborne.

For all of the above reasons, Applicant respectfully requests withdrawal of the judicially-created double patenting rejection of Applicant's claims in view of Howse.

#### Closing

In view of the above, Applicant believes that all issues outstanding from the Office Action have been addressed, and that the claims define patentable novelty over all

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the references, alone or in combination, of record. It is therefore respectfully requested that this patent application be given favorable reconsideration.

Should the Examiner have any questions with respect to any matter now of record, Applicant's representative may be reached at (219) 462-4999.

Respectfully submitted,

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Attachments: Appendix A; Abstract





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### VERSION WITH MARKINGS TO SHOW CHANGES MADE<sup>1</sup>

### In the Specification:

At page 1, the title of the invention has been amended as follows:

PEST CONTROL METHOD AND APPARATUS THEREFOR

<sup>&</sup>lt;sup>1</sup> Brackets "[]" indicate deletions and underlining "\_\_" indicates insertions.



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#### In the Claims:

Claims 1-4, 6, 7, 9-25, 28, 29, 31-46, 48, 50-54, and 56 have been amended as follows:

- 1. (Amended) A method of controlling a pest by at least partially coating the pest with a particulate material [(7,17)] incorporating a killing or behavior-modifying [behaviour-modifying] agent, the [which] method comprising the steps of drawing [comprises directing, attracting or otherwise luring] the pest sufficiently close to [on to, above, or otherwise adjacent] a surface [(4,14)] bearing the [such a] particulate material, and rendering [(7,17) to render] the particulate material [(7)] airborne by [the] movement of [off] the pest [on, above, or] in the region of the [particulate material-bearing] surface, the particulate material becoming electrostatically charged as a result of being rendered airborne [(4,14)].
- 2. (Amended) A method according to claim 1, wherein the particulate material [(7,17)] is a powder which is sufficiently fine for it to be rendered airborne by a pest moving across, flying above [or adjacent] or taking-off from the [particulate material-bearing] surface [(4,14)], so that the pest becomes at least partially coated with the powder.

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- 3. (Amended) A method according to claim 2, wherein the powder [(7) comprises or] is combined with at least one biological, synthetic or natural pesticide as a killing agent.
- 4. (Amended) A method according to claim 1, wherein the pest is an insect pest.
- 6. (Amended) A method according to claim 5, wherein the particulate material [(7)] is charged by friction.
- 7. (Amended) A method according to claim 1, wherein the surface [(4,14)] is associated with a trap [(1,11)] comprising an electrically insulating material.
- 9. (Amended) A method according to claim 1, <u>further comprising</u> [including] providing a pheromone or parapheromone attractant to lure the pest to the surface.
- 10. (Amended) A method according to claim 1, wherein the surface [(4)] is coated with the particulate material, and the particulate material is an electrostatically charged [a] fine powder [(7) which is charged electrostatically].



11. (Amended) A method according to claim 10, wherein the powder [(7)] is capable of retaining the [its] electrostatic charge while [for long periods] on the surface [(4)].

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- 12. (Amended) A method according to claim 1, wherein undesired removal or loss of the particulate material [(7,17)] from the surface [(4,14)] is eliminated or at least substantially reduced.
- 13. (Amended) A method according to claim 12, wherein undesired removal or other loss of the particulate material [(7)] from the surface [(4)] is eliminated or at least substantially reduced by means of raised edges [(9), preferably rounded,] at the periphery of the surface [(4)].
- 14. (Amended) A method according to claim 1, wherein the particulate material [(7,17)] is accommodated in at least one recess [(6) or trough (16)] associated with the [particulate material-bearing] surface [(4,14)].
- 15. (Amended) A method according to claim 14, wherein the [particulate material (7) is accommodated in] at least one recess is defined [(6) provided] in the



[particulate material-bearing] surface [(4)].

- 16. (Amended) A method according to claim I5, wherein the upper periphery of the at least one [or each] recess [(6)] is provided with raised edges [(10)].
- 17. (Amended) A method according to claim 1, wherein the [particulate material-bearing] surface [(4)] is provided on a plate [(2)] which is preformed and stands alone [, preferably upon feet (8)].
- 18. (Amended) A method according to claim 14, wherein the <u>at least one</u> recess is a [particulate material-bearing surface (14) comprises at least one] trough [(16)] in which the particulate material [(17)] is accommodated.
- 19. (Amended) A method according to claim 14, wherein the dimensions of the at least one [or each] recess [(6) or the or each trough (16), as the case may be,] in which the particulate material [(7,17)] is accommodated, are [generally] smaller than those of the pests to be controlled.
  - 20. (Amended) A method according to claim 1, wherein the surface is [(4)

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comprises] part of a tubular trap [(1)].

- 21. (Amended) A method according to claim 20, wherein the trap <u>has</u> [(1) is provided with] a triangular cross-section.
- 22. (Amended) A method according to claim 20, wherein the surface [(4)] is an interior surface of the trap [(1)].

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- 23. (Amended) Pest control apparatus comprising a surface [(4,14) on to, above or] in a [the] region of which a pest is capable of being [directed, attracted or otherwise] lured and which bears a particulate material [(7,17)] incorporating a killing or behavior-modifying [behaviour-modifying] agent, [wherein] the particulate material being [(7,17) is] capable of being electrostatically charged when rendered airborne by movement of the pest [on, above, or] in the region of the [particulate material-bearing] surface [(4,14)].
- 24. (Amended) Apparatus according to claim 23, wherein the particulate material [(7,17)] is a powder which is sufficiently fine for it to be rendered airborne by a pest moving across, flying above, [or in the region of,] or taking-off from the [particulate material-bearing] surface [(4,14)], so that the pest becomes at least partially coated with the powder.
- 25. (Amended) Apparatus according to claim 24, wherein the powder [(7,17) comprises or] is combined with at least one biological, synthetic or natural pesticide as a killing agent.
  - 28. (Amended) Apparatus according to claim 27, wherein the particulate

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material [(7,17)] is chargeable by friction.

- 29. (Amended) Apparatus according to claim 23, wherein the surface [(4,14)] is associated with a trap [(1,11)], comprising an electrically insulating material.
- 31. (Amended) Apparatus according to claim 23, <u>further</u> comprising a pheromone or parapheromone attractant [(5,15)].
- 32. (Amended) Apparatus according to claim 23, wherein the surface [(4)] is coated with the particulate material, and the particulate material is an electrostatically charged [a] fine powder [(7) which is charged electrostatically].
- 33. (Amended) Apparatus according to claim 32, wherein the powder [(7)] is capable of retaining its electrostatic charge while [for long periods] on the trap surface [(4)].
- 34. (Amended) Apparatus according to claim 23, wherein undesired removal or loss of the particulate material [(7,17)] from the surface [(4,14)] is eliminated or at least substantially reduced.

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- 35. (Amended) Apparatus according to claim 34, wherein undesired removal or other loss of the particulate material [(7)] from the surface [(4)] is eliminated or at least substantially reduced by raised edges [(9), preferably rounded,] at the periphery of the surface [(4)].
- 36. (Amended) Apparatus according to [any of] claim 23, wherein the particulate material [(7,17)] is accommodated in at least one recess [(6) or trough (16)] associated with the [particulate material-bearing] surface [(4,14)].
- 37. (Amended) Apparatus according to claim 36, wherein the [particulate material (7) is accommodated in] at least one recess is defined [(6) provided] in the [particulate material-bearing] surface [(4)].
- 38. (Amended) Apparatus according to claim 37, wherein the upper periphery of the at least one [or each] recess [(6)] has raised edges [(10)].
- 39. (Amended) Apparatus according to claim 23, wherein the [particulate material-bearing] surface [(4)] is on a plate [(2)] which is preformed and stands alone [, preferably upon feet (3)].

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- 40. (Amended) Apparatus according to claim 36, wherein the at least one recess is a [particulate material-bearing surface (14) comprises at least one] trough [(16)] in which the particulate material [(17)] is accommodated.
- 41. (Amended) Apparatus according to claim 36, wherein the dimensions of the at least one [or each] recess [(6) or the or each trough (16), as the case may be,] in which the particulate material [(7,17)] is accommodated, are [generally] smaller than those of the pests to be controlled.
- 42. (Amended) Apparatus according to claim 23, wherein the surface [(4)] is [comprises] part of a tubular trap [(1)].
- 43. (Amended) Apparatus according to claim 42, wherein the trap [(1)] has a triangular cross-section.
- 44. (Amended) Apparatus according to claim 42 wherein the surface [(4)] is an interior surface of the trap [(1)].

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- 45. (Amended) A pest control trap [(1,11)] comprising a surface [(4,14)] having at least one recess [(6,16)] therein, and [wherein] a particulate material [(7,17)] incorporating a pest killing or behavior-modifying [behaviour-modifying] agent and [, is] accommodated in the at least one [or each] recess [(6,16)], the particulate material being capable of being electrostatically charged when rendered airborne by movement of the pest in the region of the surface.
- 46. (Amended) A trap [(1,11)] according to claim 45, wherein the <u>at least one</u> [or each] recess [(6,16)] has dimensions which are [generally] smaller than those of pests to be controlled.
- 48. (Amended) A trap [(1,11)] according to claim 45 [27], wherein the particulate material [(7,17)] is a fine powder.
- 50. (Amended) A trap [(1,11)] according to claim 45, wherein the particulate material [(7,17)] is chargeable by friction as it is rendered airborne, for subsequent contamination of a pest in the vicinity thereof.

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- 51. (Amended) A method of preventing the dispersion of a pest-contaminating particulate material from [(7,17) form] a pest trap [(1,11)], the [which] method comprising the steps of forming the particulate material to be capable of being electrostatically charged when rendered airborne by movement of a pest, and [comprises] accommodating the particulate material [(7,17)] in at least one recess [(6,16)] in a surface [(4,14)] of the trap [(1,11)].
- 52. (Amended) A method according to claim 51, wherein the particulate material [(7,17)] comprises a fine powder.
- 53. (Amended) A method according to claim 51, wherein the [pest-contaminating] particulate material [(7,17)] is protected from wind action.
- 54. (Amended) A method according to claim 51, wherein the particulate material [(7,17)] is attached to a pest as it flies in the region of or takes-off from the surface [(4,14)].
- 56. (Amended) A method according to claim 55, wherein downthrust of air generated by the pest's wing beats, renders the particulate material [(7)] airborne.